

Table 1

Referred Patent No. 5,731,875 (Chandler et al.)	Application Serial No. 08/884,680
Regarding item 9 of the Office Action	
<p>1) Patent and Trademark Office is referred to the Patent No. 5,731,875 (Chandler et al.), which was filed on the date of June 26, 1997.</p> <p>2) Referred Patent has a plurality of light emitting lasers...</p> <p>3) On Fig. 4 is presented a conduit (23) with a plurality of fiber optic stands (27a) [see column 5, lines 18, 19 of the top] and includes an optical element for scattered light collecting (see Claims 1, 9, etc.)</p> <p>4) Fig. 4 illustrates:</p> <p>a). a conduit (23)..., including a plurality of a fiber optic stands (27a), which directs light from each diode (15)...</p>	<p>1) The above Application was filed by Provisional Patent Application Serial No. 60/048,277 on the date of June 02, 1997 (please, see also Transmittal Letter of the above Utility Patent Application Serial No. 08/884,680 with the reference to the Provisional Patent Application).</p> <p>2) A plurality of light emitting lasers means <u>absolutely correctly</u> <i>two and more</i> (plural means 2, 3, 4, ...,), but in above Application is <i>claimed only one (single) light beam</i>.</p> <p>3) Above Application (see Fig. 10) represents a single fiber optic connecting means (29), which <u>does not have</u> an optical elements for scattered light collection.</p> <p>4) An improved device by above Application <u>does not have</u> a plurality of fiber optic stands and a plurality of diodes, having just a single diod (4).</p> <p><u>Additionally</u>, the Referred Patent has a plurality of fiber optic stands with a plurality of laser diodes (a plurality of light sources) for the purpose of power dividing (to eliminate a heat-sink), that is missing in the above Application.</p>
Referred Patent No. 5,610,712 (Schmitz et al.)	Application Serial No. 08/884,680
<p>1) Referred Patent No. 5,610,712 (Schmitz et al.) claims:</p> <p>a). "...focusing light emanating...to produce a collimated ... light..." (see Claim 1 and focusing lenses (64) and (66) in column 6, lines 31,32 of the bottom)</p> <p>b). "...producing a plurality of diffracted beams..." (see Claim 1 [see column 7, line 13 of the top]).</p>	<p>1) An improved device of above Application:</p> <p>a). <u>does not focusing</u> light emanating...to produce a collimated...light and lenses.</p> <p>b). <u>does not produce</u> a plurality of diffracted beams...</p>

Table 1 (continuation)

<p>c). "...focusing the diffracted beams with a lens at..." (see Claim 1).</p> <p>d). "...Fourier plane with a plurality..." (see Claim 1).</p> <p>2) Figs. 2, 3</p> <p>a). Fig. 2 introduces a referred device, comprising a cladding layer surrounding a central arc... [see Claim 4].</p> <p>b). Fig. 3 illustrates "...a diffraction and other scattering theory." [see column 7, lines 13, 14].</p>	<p>lens.</p> <p>c). <u>does not focus</u> the diffracted beams with a lens.</p> <p>d). <u>does not have</u> Fourier plane with a plurality...</p> <p>2) Referring to above Application:</p> <p>a). an improved device <u>does not comprise</u> a cladding layer surrounding a central arc...</p> <p>b). an improved device <u>criticizes</u> some of the scattered light detection principles [see Background of the Invention of the above Application].</p>
--	---

Table 2

Referred Patent No. 4,595,291 (Tatsuno)	Application Serial No. 08/884,680
<p>Regarding item 10 of the Office Action</p> <p>1) This Referred patent claims a device, comprising a plurality of <u>optical fibers</u>, each receiving <u>scattered light</u> (see "scattered light" through the text of Specification, Figs.3, 5, 6, 9 and, for example, Claim 1 [see column 12, lines 19, 20 of the top] and Claim 9 [column 13, line 23 of the top], etc., and also comprising a <u>lenses</u> [see 32 on Figs.4, 7 and 62 on Figs.10, 12, 15-17].</p> <p>2) Figs.10, 12, 17</p>	<p>1) Above Application <u>criticizes</u> some of the scattered light principles (see Background of the Invention of the above Application) and an improved methods and device are particularly intended for particle direct detection and <u>do not include</u> the lenses</p> <p>2) The Figs.10, 12, 17 of the Referred Patent are regarding scattered light detection /please, see the item 1) above in this column/.</p> <p><u>Additionally</u>, applicant would like to bring Examiner's attention to the following:</p> <p>The device by Referred Patent possibly can not provide the particle measuring by described in that Patent scattered light collection principles, because the scattered light may not be dispersed (distributed) in the direction of the optical fibers, considering that the optical fibers are located in the "dark" zone for scattered light beam (in the non-effective zone for scattered light, please, see the figure in Table 4).</p>

Table 3

Referred Patent No. 5,325,169 (Nakamoto et al.)	Application Serial No. 08/884,680
<p>Regarding item 11 of the Office Action</p> <p>1) This Referred Patent claims the method and device, which are based in the scattered light principles (see Figs.4-8 and independent Claims 1, 7, 18)</p>	<p>1) Above Application criticizes some of the scattered light detection principles (see Background of the Invention of the above Application) and an improved methods and device are particularly intended for particle direct detection.</p>

Table 4

Referred Patent No. 5,619,333 (Staff et al.)	Application Serial No. 08/884,680
Regarding item 8 of the Office Action	The disclosure made in the item 8 of Office Action is not presented in the Referred Patent and belong exclusively to the above Application
<p>Claims 1-15 are rejected, because: (please, see item 8 of Office Action)</p> <p>1) "...a light detecting means (4)..." - [see lines 1,2 of the bottom of page 3 of Office Action]</p> <p>2) "...a light source (451)..." - [see line 1 of the bottom of page 3 of Office Action]</p> <p>3) "...intersects a light beam in an area of a light detection means..."</p> <p>4) Figs. 6-8:</p> <p>a). Fig. 6 comprises the comparators (484)</p> <p>b). Fig. 7 comprises a voltage comparators (504,</p>	<p>1) Referred Patent <u>does not</u> comprises a light detecting system (4). This Referred Patent comprises <i>an optical sensor</i> (4) [see column 3, line 35 of the top], having <u>window</u> (421) [see column 4, line 25 of the bottom] and <u>lens</u> (43) [see column 4, line 23 of the bottom], which are missing in the above Application.</p> <p>2) Referred Patent <u>does not</u> comprises a light source (451). Referred Patent comprises <i>a bulb</i> (451) [see column 4, line 17 of the bottom], from which the light <i>is focused</i> through <i>the window assembly</i> (42) [see column 4, line 24 of the bottom] <i>by the lens</i> (44) [see column 4, line 23 of the bottom], which are missing in the above Application.</p> <p>3) This is absolutely missing in the Referred Patent and belong <u>only</u> to Claims 1,6 of above Application as a novelty and does not have the known equivalents.</p> <p>4) Referred Patent is based on the method of the analog comparison of the detected signals. Applicant is agreed with Examiner and Claims 2,3 are canceled and amended Specification and Claims disclose only an improved Timing Processing (Digital Processing).</p> <p>a). The comparators (484) are missing in the amended Specification and Claims /please, see item 4) above in this column/.</p> <p>b). Please, see the description in the items 4), 4a) above</p>

Table 4 (continuation)

506).

c). Fig.8 comprises the voltage comparator (512)

in this column.

c). Please, see the description in the items 4),4a) above in this column

Additionally, applicant would like to bring Examiner's attention to the following:

An improved methods and device eliminate any optic means for focusing, because the point of intersection of the light beam with the particle flow is particularly in the area of the detection means, that provides the elimination of any windows, gates, lenses, etc. and also eliminates a light noise, producing by scattered light.

This is possible, because the improved method and device provide the elimination of the scattered and non-focused light (please, see figure below, additionally illustrating the advantage of the improved method and device):

